

REMARKS

This paper is submitted response to the Office Action for the above-identified application mailed 18 August 2009.

Under cover of the Office Action, the previously presented claims, Claims 28 and 29, were rejected under 35 U.S.C. Sec. 103 for being obvious over Trott, U.S. Pat. No. 5,839,196 in view of Evans, U.S. Pat. No. 5,263,972.

Initially, under cover of this Response, amendments are made to the specification. These amendments do not introduce new matter.

Claim 28 and 29 are now canceled. New Claims 30-49 are added. Claims 30, 37 and 44 are now the independent claims of this application.

Trott only discloses an assembly in which a clamp 122 hold a saw blade 14 directly against the housing 120 that oscillates the blade.¹

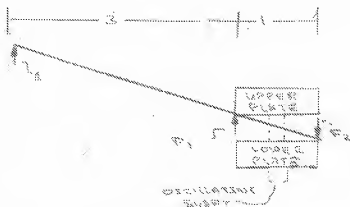


Figure 1. Diagrammatic illustration of the forces imposed on the end of the blade and that clamp the blade when the blade is used as a pry tool.

¹ U.S. Pat. No. 5,839,196, column 7, lines 6-20 and Figure 11.

Figure 1 above illustrates the forces imposed on a blade and the plates that hold, clamp, the blade when the blade is used as a pry tool. Here the blade has a length three times the length of the clamping plates. For this example, a force of 1 is output by the blade when it functions as a pry tool. When the blade is so used as a pry tool an upward force, F_1 , is applied to the upper plate (Trott's cap) to move it away from the lower plate (Trott's housing) between the blade is clamped. A force F_2 , opposite in direction to F_1 , is applied to the opposed end of the lower plate. Since the sum of the of forces, and therefore the sum of torques in the system would equal zero,

$$\Sigma_{\text{FORCE}} = 0 = 1 + F_1 + F_2$$

Therefore $\Sigma_{\text{TORQUE}} = 0 = 3F_1 + 4F_2$

$$F_1 = -4/3F_2$$

Collectively, this means in the above situation, that force F_1 pushing up on the upper plate is 4 and the opposed force F_2 pushing down on the lower plate is 3. The sum of these forces, 7, means that the when a blade is used to as a prying tool the sum of the forces applied to Trott's assembly to pull its clamp from its head is seven times the prying force. Sometimes, these forces applied to the head can be so great they can overcome the force of the spring used to hold the clamp to the head.

Should this event occur, the clamp can move away from the head a sufficient distance that the blade can unintentionally pop out of the space between these two components.

Applicants' claimed invention includes a collar that is spaced from his overlying cap that is "integral" with

the cap. Thus, Applicants' invention is constructed so his collar functions as his lower plate of the diagram of Figure 1. This means that when the blade is used as a prying tool, the F_2 force, instead of being applied to the underlying drive plate, is applied to the collar. Since the collar and cap are integral assembly the combined F_1 and F_2 force are applied to a single assembly rather than the two components capable of moving relative to each other.

Thus, unlike with Trott, these forces do not work against the components that hold the blade to the saw.

Evans is constructed so that the blade is compressed on one side between interior flat 61 of top casing 50 and ramps 93 of a spring biased disk 92.² Evans' disk 92 can move relative to his top casing 50. This is partially why Evans relies on his wide diameter pin segment 109 to hold his blade to his chuck.

Thus, Evans, like Trott, only discloses an assembly for holding a blade to an oscillating structure wherein the two surfaces against which the blade bears when used as a prying tool are able to move relative to each other.

Furthermore, to oscillate a blade, Evans requires one to provide a blade with parallel side surfaces that can abut the parallel internal side walls 62 of the top casing 50.³

In contrast, the claimed invention relies on prongs to both hold the blade in the slot between the collar and the cap and impart oscillating motion from the drive plate to

² U.S. Pat. No. 5,263,972, column 12, lines 3-13 and Figure 4C.

³ U.S. Pat. No. 5,263,972, column 8, lines 23-35 and Figure 6.

the blade. The use of these prongs eliminates the need to provide a blade having the geometric features required by Evans. Thus, by simply providing cylindrically shaped prongs to fit in the holes in the proximal end of Trott's blade 14, reproduced as Figure 2 below, one could provide a version of Applicant's invention for use with this blade. It is respectfully submitted that, given that the proximal end of Trott's blade does not have parallel sides, inserting it in Evans results in an inoperable assembly.

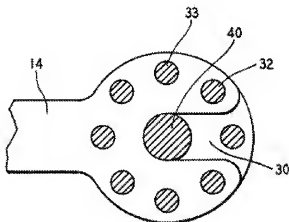


Figure 2. Figure 2 from U.S. Pat. No. 5,839,196 shows a blade where the opposed side edges of the proximal end of the blade, the end submitted in the saw, are not parallel to each other.

Also, unlike both Trott and Evans, the claimed invention includes on "rigid" raised members to both hold the blade off the drive plate and serve as one-half of the clamping structures. In the event, over time, the prying between the collar and cap causes a deformation of these two components, the raised member are not affected by this

deformation. Instead, the raised members, even if the spacing between the collar and cap opens up, would still press against the saw blade so as to clamp the blade in place.

Thus, even when Trott and Evans are viewed together, their sum does not suggest a saw assembly having either the features or benefits of Applicants invention as recited by the present independent claims.

Moreover, dependent Claims 32, 43, 45 and 49 are directed to the version of the invention wherein the raised members and prongs are integral with each other. The prior art fails to suggest even the presence of the fixed raised members. Therefore, the combination of these members and the prongs is even more removed from the prior art. An advantage of these integrated structural components is that they offer a relative tight coupling bond between the oscillating drive plate and the saw blade.

Accordingly, at least the above-discussed dependent claims are further in condition for allowance because they are independently directed to a patentable invention.

In conclusion, it is respectfully submitted that all the claims of this application are directed to a patentable invention and are in an allowable form. Since the claims

as well as the other parts of this application are in an allowable state, the Applicant now courteously solicits prompt issuance of a Notice of Allowance.

Respectfully submitted,

18 January 2010

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